# National Climatic Data Center

# DATA DOCUMENTATION

# FOR

# DATA SET 6116 (DSI-6116)

**GTS NCEP PREPBUFR Data**

## December 4, 2002

National Climatic Data Center
151 Patton Ave.
Asheville, NC 28801-5001 USA

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**Table of Contents**

1. **Abstract**: These files come from National Weather Service's National Centers for Environmental Prediction (NCEP) FNL (final) model runs for 00z, 06z, 12z, and 18z, via the WMO's Global Telecommunications System (GTS), and contain all of the quality-controlled data that is input to the analysis for the model run in question. All data types used by the model are present, including ADPUPA (upper air), SFCSHP (marine surface), AIRCAR (ACARS), ADPSFC (land surface), etc. The file is produced by first, at a designated data cutoff time, dumping all of the available decoded BUFR data that is valid within the appropriate time window for each of the required types into a separate file for each type. During this dump step, the data for each type are duplicate checked and any "keep" or "delete" flags entered by the NCEP SDM are applied. The dumped data for all of the types are then combined into one file and then together undergo all the NCEP automated quality-control processing programs such as RADCOR, CQCHT, VIRTMP, OIQC, etc. You can thus view the QC history of each piece of data by unpacking the appropriate QM quality marks, PC program codes, and RC reason codes. This file is ready to be input to the modeling codes that generate the NCEP analyses and forecasts.

Data are in BUFR (Binary Universal Form for the Representation of meteorological data). BUFR is a binary code designed to represent, employing a continuous binary stream, any meteorological data. Access is through use of software provided by NCEP (National Centers for Environmental Prediction). A decoder may be obtained using the following URLs:

**http://www.ncep.noaa.gov/NCO/DMQAB/Decoders/**

**http://www.emc.ncep.noaa.gov/mmb/papers/keyser/data_processing/**

A series of programs read in the observations from the various dump files, add background and observation error information, perform automated quality control, and finally output the observations in a monolithic BUFR file known as **"PREPBUFR"**. Thus the name **GTS NCEP PREPBUFR.**

2. **Element Names and Definitions**: See web sites above for definitions.

3. **Start Date**: 19990716

4. **Stop Date**: Ongoing.

5. **Coverage**: Global

   a. Southernmost Latitude: 90S
   b. Northernmost Latitude: 90N
   c. Westernmost Longitude: 180W
   d. Easternmost Longitude: 180E

6. **How to Order Data**:

   Ask NCDC's Climate Services about the cost of obtaining this data set.
   Phone: 828-271-4800
   FAX: 828-271-4876
   E-mail: **NCDC.Orders@noaa.gov**

**7. Archiving Data Center:**

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, NC 28801-5001
Phone: (828) 271-4800.

**8. Technical Contact:**

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**9. Known Uncorrected Problems:** No information provided with original documentation.

**10. Quality Statement:** No information provided with original documentation.

**11. Essential Companion Datasets:** No information provided with original documentation.

**12. References:**

A Guide To The WMO Code Form FM 94 BUFR W. Thorpe

See also: **http://www.ncep.noaa.gov/NCO/DMQAB/Decoders/BUFRLIB/**